

APPENDIX D

STAGING, STORAGE and DISPOSAL SITES

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APPENDIX D

STORAGE/DISPOSAL SITES

1. Pre-Disaster Planning.

a. Corps: The advanced identification and acquisition of debris storage sites is the responsibility of the local Government. Therefore, encouragement of local officials to predesignate sites should be given whenever possible (i.e., conferences, interagency meetings and exercises, etc.). When preselection is possible, the Corps should be proactive in assisting local governments in sizing, locating and environmentally evaluating sites. When sizing sites a forecast of the amount as well as types of debris should be considered. For example, prior to Hurricane Andrew the Miami area had not had a major storm for over 20 years. This allowed for the development of a dense forest canopy which was virtually destroyed thereby generating a large fraction of vegetative debris. Forecasting can also be done on a land use basis (i.e., rural, urban, industrial, etc.). The types of debris expected to be stockpiled at a given site will reflect the types of land use in the nearby area of collection.

b. Local Governments: Sites should be pre-designated.

(1) Public Property

(2) Private Lands:

a. 50 - 200 acres

b. Location taking into consideration - Noise, Traffic and Environment

(3) Permits:

- a. Wetlands
- b. Groundwater
- c. Endangered Species
- d. Historic
- e. HTW Sites

(4) Landfills:

- a. Present Debris and Logistical Capacity
- b. State-to-State/County-to-County Agreements

(5) Recycling:

- a. Timber Agreements
- b. Mulch/Chip Disposal
- c. Agriculture Community
- d. Fuel Source for Incinerator

2. Post Disaster Assessment.

As mentioned above, providing debris storage/disposal sites is the responsibility of the state/local governments, however, as an absolute last resort the Corps, if tasked by FEMA, can acquire sites by leasing. If this situation occurs a memorandum should be forwarded for FEMA's signature authorizing the USACE to act as a leasing agent for FEMA (see Tab 8).

a. POC's

- 1) Local County/State Attorneys
- 2) Local/State/Federal Environmental Agencies
- 3) County Engineer/Department of Public Works

b. Assessment Recommendations - If the Corps is tasked by FEMA to acquire storage/disposal sites, a selection team comprised of the following persons is recommended:

<u>Team Member</u>	<u>Function</u>
Contractor Representative	Logistical Location
Corps/Real Estate	Lease Arrangements
Local Environmental	Permits
Corps Environmental	Permits

See Site Selection Checklist - Paragraph 4.

3. Mission. If FEMA tasks the Corps to lease storage/disposal sites it will usually fall under the umbrella of the overall Debris Removal Mission. The funds authority of the debris mission will be increased to cover site leasing.

FEMA may task the Corps to perform a variety of options in support of storage/disposal operations. Tasking will normally fall within one of the three following categories:

- a. No Corps tasking, site is leased by local government or is public property and operated by local government
- b. Local government leased or owned and Corps operated
- c. Corps leased and operated

4. Special Coordination Issues. The following special issues/checklists will help in the site selection, documentation, remediation, HTW handling, and site operations part of the storage/disposal process.

a. Site Selection Checklist. (Also provided in Appendix L)

(1) Ownership

- ☐ Public lands are preferred.
- ☐ Private Lands
- ☐ Are lease terms long enough?
- ☐ Are lease terms automatically renewable?
- ☐ Does lease include landscape restoration agreement?

(2) Size

- ☐ Is the site large enough to accommodate the planned debris storage and/or reduction method (50-100 acres)?
- ☐ Will the site configuration allow for an efficient layout?

(3) Location

(a) Things to Avoid:

- ☐ Wetlands? If unavoidable, inform contractor, flag and establish buffer and/or turbidity barriers
- ☐ Public Water Supplies? Well fields or surface waters
- ☐ Threatened and Endangered Species? Animals and Plants
- ☐ T & E Critical Habitats?
- ☐ Rare Ecosystems? Ask the locals
- ☐ Historic Sites?
- ☐ Archaeological Sites?
- ☐ Sensitive Surrounding Land Uses? Residential, Schools, Churches, etc.
- ☐ Consider prevailing winds (smoke).

(b) Things to Look For:

- ☐ Good ingress/egress
- ☐ Good transportation arteries
- ☐ Open flat topography

b. Site Documentation/Baseline Data Checklist. (Also provided in Appendix L)

(1) Before activities begin

- ☐ Video/photograph aerial?
- ☐ Video/photograph ground?
- ☐ Notation of important features? Structures, fences, culverts, landscaping, etc.
- ☐ Random soil sampling?
- ☐ Water samples from existing wells?
- ☐ VOC Volatile Organic Carbon "sniffing"

(2) After activities begin

- ☐ Groundwater sampling wells?
- ☐ Groundwater monitoring wells?
- ☐ Spot soil sampling at "hot" areas such as HTW, Ash, and Fuel storage areas as they are being set up?

(3) Progressive updates

- ☐ Periodically update videos/photographs?
- ☐ Periodically map/sketch site layout including "hot" areas
- ☐ Integrate QA reports? Contractor fuel spills, etc.

c. Site Remediation/Closure Checklist. (Also provided in Appendix L)

Generic checklist for COE QA/CQC to be used for determining adequacy of closure prior to final payment, assuming that Corps contractors will haul debris from sites and be responsible for site closure. See Tab 2.

- ☐ Lease special conditions met?
- ☐ Disturbed or filled wetlands restored, location marked on plans?
- ☐ Ash pile tested, removed, disposed?
- ☐ HTW removed and disposed?
 - ☐ Chain of custody?
 - ☐ Inventory
 - ☐ Location of storage area marked on plans?
- ☐ Debris stockpiles removed and disposed?
 - ☐ Metals?
 - ☐ Unburnables?
 - ☐ Mixed trash?
 - ☐ Construction and demolition debris?
 - ☐ Clean yard waste?
 - ☐ Tires?
 - ☐ Other?
- ☐ Contractor petroleum, and HTW spills remediated?
- ☐ Perimeter berms leveled and topsoil restored?
- ☐ Existing groundwater monitoring wells identified, secured and restored?
- ☐ Environmental records submitted (contractor groundwater and air quality monitoring if any, chain of custody for HTW, state environmental approvals for agricultural well closures, etc.)?

_____Site secured wherever stockpiles (chips, tires, etc.) do remain, to discourage illegal dumping?

_____All contractor equipment and temporary structures removed?

d. HTW, Disposal Sites

A separate staging area for HTW materials/contaminated soils and debris should be established within the storage/disposal site. This area should be lined with impermeable material and bermed to prevent contamination of surrounding area.

HTW materials should be removed by HTW contractors for disposal in accordance with Federal, State and local regulations.

e. Site Operations - Site control or controlling who has access to the storage/disposal sites has to be determined prior to starting work. It is recommended that if public landfills are available, non-Corps contractors and the general public be directed to these public facilities in lieu of Corps operated sites. This is desirable in order to limit liability as EM 385-1-1 (Safety Manual) is not applicable to the general public.

If local (public) landfill sites are not available, then segregated dumping and operational areas need to be established to separate Corps contractors from all others (non-Corps contractors and general public). The number of these sites should be kept to a minimum, based on demand. PAO should be involved so that the public can be advised of locations, hours of operation, restrictions, etc.

See Tab 3

5. Engineering/Construction. Site preparation and operation are usually left up to the contractor, however guidance "up front" can help avoid operational problems later.

a. Recommend that the contractor provide a site operations plan for review and approval by the Resident/Area Engineer prior to beginning work. The plan should address the following:

- 1) Access to site
- 2) Site management to include POC organizational chart, etc.
- 3) Traffic control procedures
- 4) Site security
- 5) Site safety
- 6) Baseline environmental testing and monitoring plan
- 7) Site layout/segregation plan
- 8) HTW Materials Plan

9) Environmental Mitigation Plan

- a. Smoke
- b. Dust
- c. Noise
- d. Traffic
- e. Buffer Zones
- f. Storm water run-off

b. Write contract scopes of work for site operations contract.

6. Contract Considerations.

a. Contracts for storage/disposal site operators may be a separate contract or included as a part of the overall debris removal contract. There is a logistical advantage for including site operations in the removal contract. This eliminates possible problems that might occur between different contractors such as causing trucks to wait or back up at the dump site or vice versa having too many trucks overwhelming the disposal site capabilities.

b. Recommend a separate contract for HTW removal.

7. Real Estate. The following real estate actions are required in support of the debris storage/disposal site mission and are based upon the premise that USACE has been tasked by FEMA to provide storage/disposal sites.

a. Resolutions: Obtain resolutions from local entities (city, county) requesting assistance and indemnifying the Government against any claim.

b. Maps: Contact local authorities (city engineering, county engineering, planning commission) to obtain detailed maps showing property ownership of land to be cleaned up.

c. Lease Agreements:

1) Are lease terms long enough?

2) Are terms automatically renewable?

3) Does lease include closure or landscape restoration details?

d. Rights of Entry Permits: Written permission must be obtained from the property owner/owners agent before entering onto private property. (See Tabs 4 and 6)

8. Logistics: N/A

9. Public Affairs: Public Affairs must communicate to the public where the public disposal sites are located, hours of operation and acceptable/non-acceptable debris that can be dumped.

10. Reporting:

a. Size and number of sites.

b. Present capacity of site.

11. Attached Reference Information:

Tab 1	Baseline Data Collection
Tab 2	Remediation
Tab 3	Site Operations
Tab 4	Real Estate Resolution
Tab 5	Permit to dump on Private Lands
Tab 6	Right of Entry Permit
Tab 7	Right of Entry Permit
Tab 8	FEMA Memorandum

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Tab 1

BASELINE DATA COLLECTION

THE NON-EMERGENCY BUREAUCRACY WILL BE IN PLACE DURING CLOSEOUT

As soon as a site is selected, gather as much baseline data as is reasonably possible. A little effort up front can save costs and efforts later.

Videotape/photographs - As a minimum, aerial as well as ground video (narrated) and photographs should be made before any activities start at the site.

Documentation of physical features - Notations about structures, fences, culverts, irrigation systems, etc., can help evaluate inevitable damage claims made later.

Soil and Water Sampling - Data collected must be acceptable and defensible. Random soil samples can be easily collected before any activities begin. More time consuming groundwater sampling can be done soon after start-up of operations. Soil sampling of specific areas such as HTW, ash, and fuels storage areas can be done prior to their setup. Sampling must be consistent and chain of custody must be maintained. Advance planning with State/County environmental agencies can establish requirements (e.g., acceptable collection methods, certified labs, parameters to be tested for, etc.). If in-house assets are not available then consider establishing an off-the-shelf contract with a environmental consulting firm that can rapidly respond.

PROGRESSIVE UPDATES

Begin documenting site operations keeping in mind that a final closure report may be needed

Periodically update video/photographic documentation to track site evolution.

Periodically map/sketch out activity locations so that areas of concern can be pinpointed later for additional sampling. Site operation layout will change as debris is processed.

Integrate QA reporting into site history file. Document contractor operations that will have a bearing on closeout such as; petroleum spills at fueling sites, hydraulic fluid spills at equipment breakdowns, contractor installation of water wells for pile cooling or dust control, discovery of HTW in debris and details on its storage and disposal.

LANDSCAPE CONDITIONS

Environmental remediation is the government's legal responsibility, however, final restoration of the landscape is largely a matter of what is acceptable to the landowner. Therefore, work out the landscape restoration plans as quickly as feasible and preferably incorporate a basic plan in the lease if possible. In the case of Andrew, several landowners desired to change the land use and did not wish the pre-existing landscape restored.

SITE SELECTION CRITERIA

Ownership-Public lands should be used first to avoid costly leases. When selecting private sites consider preexisting conditions that will have to be restored upon closeout.

Size-The required size of the site will depend on the expected volume to be collected and the planned reduction methods. *General Rule of Thumb* - Larger sites mean FEWER sites. Fewer sites mean mission closeout.

Environmental Conditions - look for and avoid:

- Wetlands
- Endangered Species (animals and plants)
- Rare and Critical Habitats (ask locals)
- Water Supplies (Well fields and surface waters)
- Historic/archaeological sites

Surrounding Land Uses - Public acceptability is largely dependent upon the activities planned for the site. Smoke from burning, around-the-clock noise from equipment operation, dust and traffic are tolerated early but curtailed later. Whenever possible, avoid residential areas, schools, churches, hospitals, etc.

Transportation Routes - Look for sites with good ingress/egress to accommodate heavy truck traffic.

Tab 2

REMEDIATION

The ultimate closeout of a site is a two-pronged approach:

Environmental Remediation - Cleanup of soil and water to meet Local, State and Federal law.

Landscape Restoration - Restoring the site to its previous land use.

The basic closeout steps are:

- a. Debris clearance to final disposal
- b. Environmental audit/assessment
- c. Development of remediation/restoration plan
- d. Execution of the plan
- e. Sign off by appropriate environmental agency
- f. Acceptance by landowner and termination of lease payments

The key to timely closeout of the mission is the efficient scheduling of the above activities for multiple sites. Therefore, critical path scheduling of all the activities as far in advance as possible will minimize "down time" between steps.

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Tab 3

DEBRIS STORAGE AND REDUCTION SITES

SITE OPERATIONS

Site preparation and operation are usually left up to the contractor but guidance can help avoid problems with the ultimate closeout.

Preparation - Evaluate topographic and soil/substrate conditions to determine best site layout. In the case of Andrew, the local soils were very thin, about 1 to 2 feet to the bedrock. To preserve the integrity of the tillable soils in farming areas, the topsoil was scraped to bedrock and stockpiled in perimeter berms. Upon closeout of the site the uncontaminated soil was respread. The point is think of ways to make remediation/restoration easier when planning site preparation.

Operations -

a. Establish lined temporary storage areas for ash, HTW, fuels, and other materials that can contaminate soils and groundwater. Set up plastic liners when possible under stationary equipment such as generators and mobile lighting plants. Include this as a requirement of the contract scope of work.

b. If the site is also an equipment staging area, monitor fueling and equipment repair to prevent and mitigate spills of petroleum products, hydraulic fluids, etc. Include clauses in contract SOW to require immediate cleanup by the contractor.

c. NIMBY (Not In My Back Yard) Concerns - Be aware of and mitigate things that will irritate the neighbors such as:

Smoke - Proper construction and operation of burn pits. Do not overload air curtains.

Dust - Employ water trucks.

Noise - Construct perimeter berms.

Traffic - Establishment of a buffer zone can abate much of the above.

d. Site Layout - consider:

Onsite traffic patterns.

Materials segregation in light of reduction/processing plans.

e. Other considerations: Operations that modify the landscape, such as substrate compaction and over excavation of soils when loading debris for final disposal, will affect the landscape restoration.

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Tab 4

RESOLUTION

WHEREAS, on the _____ day of _____, 19-, the President declared a "major disaster" in the State of _____ under the provision of Public Law 288, 93rd Congress; as amended, and

WHEREAS, _____ is a public entity within said State;

NOW THEREFORE, BE IT RESOLVED BY _____, that the Office of Federal Emergency Management Agency (FEMA) be and the said Office hereby is, requested to arrange to have the appropriate Federal Agency perform the following work:

Debris and wreckage removal from public and private properties.
This body certifies that, to the best of its knowledge and belief, the requested work is eligible under Public Law 288, 93rd Congress, and agrees to (a) provide without cost to the United States all land, easements, and right of way necessary for accomplishment of the approved work; and (b) hold and save the United States free from damages due to the approved work and with respect to debris removal shall indemnify the federal government against any claim arising from such removal.

Passed and approved this the _____ day of _____, 19 ____.

Name and Title

Name and Title

Name and Title

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Tab 5

PERMIT TO DUMP ON PRIVATE LANDS

The undersigned hereby certifies and warrants that they are the title owners of the property described herein and hereby authorizes the United States of America, its successors and assigns, its contractors and/or subcontractors, the authority and permission to enter onto the premises located within the County of _____, State of _____ more commonly identified as follows:

For the purpose of dumping storm-generated debris onto the above described property.

The undersigned further agrees and warrants that they will hold harmless the United States, the U.S. Army Corps of Engineers, its contractors and/or sub-contractors, from any damage of any type whatsoever, either to the above-described property or persons situated thereon, and hereby releases, discharges, waives any and all actions, legal or equitable, which the undersigned has or ever might have by any action of the United States, the U.S. Army Corps of Engineers, its contractors and/or sub-contractors.

Signed and sealed this _____ day of _____ 19-.

WITNESS:

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Tab 6

Application No. _____

RIGHT-OF-ENTRY PERMIT

General Debris

Date _____

City

County

The undersigned hereby certifies and warrants that he is the title owner or the authorized agent of said owner of the property described herein, and the undersigned hereby authorizes the City of _____, County of _____, its successors and assigns, including the Corps of Engineers and its contractors and subcontractors, the authority and permission to enter in and onto the premises located within the aforesaid city and county more commonly identified as

and remove any and all storm-generated debris from the above described property of the undersigned or his authorized agent at no expense to said property owner. (Generally speaking, debris will consist of downed trees, trees leaning in excess of 20 degrees from the vertical, and structural debris which constitute a safety hazard to the continued use of the property.)

The undersigned agrees that all items not to be removed from the above described property will be boldly marked "DO NOT REMOVE". (SEE SPECIAL CONDITIONS NOTED BELOW.)

The undersigned further agrees and warrants that it will hold harmless the City of _____, County of _____ the United States, the United States Army Corps of Engineers, its contractors and subcontractors for any damage of any type whatsoever, either to the above described property of persons situated thereon, and hereby releases, discharges and waives any and all actions, either legal or equitable, which the undersigned has or ever might or may have by reason of any action of a aforesaid city and county, its successors and assigns, while removing storm-generated debris from the above property.

I have not and will not receive private insurance compensation for debris removal.

For the considerations and purposes set forth herein, I hereby set my hand and seal this _____ day of _____

Witnessed By: _____

Property Owner or Property
Owner's Authorized Agent

Current Telephone No. _____

Current Address: _____

SPECIAL CONDITIONS:

_____ The owner or agent agrees that all downed trees 6" or more in diameter after initials appropriate trimming of limbs and branches and cut in approximate 8-foot lengths may be left on the above described premises.

_____ The owner or agent agrees that all trees leaning against structures in the above initials described premises may be removed

Tab 7

Application No. _____

RIGHT-OF-ENTRY PERMIT

Demolition

Date _____

City

County

The undersigned hereby certifies and warrants that he is the title owner or the authorized agent of said owner of the property described herein, and the undersigned hereby authorizes the City of _____, County of _____, State of _____ its successors and assigns, including the Corps of Engineers and its contractors and subcontractors, the authority and permission to enter in and onto the premises located within the City of _____, County of _____, State of _____, more commonly identified as _____

to demolish and remove those structures and/or portions thereof which were damaged as a result of Hurricane Eloise and which have been determined to be beyond economical repair and present a threat to the safety of the general public.

The undersigned further agrees and warrants that it will hold harmless the City of _____, County of _____, the United States, the United States Army Corps of Engineers, its contractors and subcontractors for any damage of any type whatsoever, either to the above described property of persons situated thereon, and hereby releases, discharges and waives any and all actions, either legal or equitable, which the undersigned has or ever might or may have by reason of any action of the City of _____, County of _____, State of _____, its successors and assigns, while accomplishing the demolition, removal and disposal of the above described property.

For the considerations and purposes set forth herein, I hereby set my hand and seal this ____ day of _____, 19____, and that by affixing my signature I do certify that to the best of my knowledge and belief the above-described property is beyond economical repair and presents a threat to the safety of the general public.

Witnessed By:

economical repair and constitute a threat to the safety of the general public.

VERIFICATION:

It has been determined that the structures to be removed under this Permit are beyond

State of

Corps of Engineers

Property Owner or Property Owner's
Authorized Agent

APPROVED:

Lessee

Mortgagee

Tab 8

MEMORANDUM FOR ESF-3

Date

SUBJECT: Right of Entry/Leasing Authorization

In connection with ESF #3 tasking pertaining to the removal and burning of debris, the Corps of Engineers is hereby authorized to obtain the right of entry to private property on behalf of FEMA, for the purposes of removing debris as the result of Hurricane _____. For the purpose of burning debris removed from public and/or private property, the Corps is further authorized and directed to obtain, on behalf of FEMA, the necessary real estate interests for the required burn sites, including acquiring such sites by condemnation if such method of acquisition is determined to be more advantageous to the government.

FEDERAL COORDINATING OFFICER

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